MODIFIED RELEASE COMPOSITIONS OF MILNACIPRAN

Abstract of the Invention

A once-a-day oral milnacipran modified release formulation has been developed. The formulation comprises an extended release dosage unit (optionally containing the immediate release portion) coated with delayed release coating. The milnacipran composition, when administered orally, first passes through the stomach releasing from zero to less than 10% of the total milnacipran dose and then enters the intestines where drug is released slowly over an extended period of time. The release profile is characterized by a 0.05-4 hours lag time period during which less than 10% of the total milnacipran dose is released followed by a slow or extended release of the remaining drug over a defined period of time. The composition provides in vivo drug plasma levels characterized by T_{max} at 4-10 hours and an approximately linear drop-off thereafter and C_{max} below 3000 ng/ml, preferably below 2000 ng/ml, and most preferably below 1000 ng/ml. The composition allows milnacipran to be delivered over approximately 24 hours, when administered to a patient in need, resulting in diminished incidence or decreased intensity of common milnacipran side effects such as sleep disturbance, nausea, vomiting, headache, tremulousness, anxiety, panic attacks, palpitations, urinary retention, orthostatic hypotension, diaphoresis, chest pain, rash, weight gain, back pain, constipation, vertigo, increased sweating, agitation, hot flushes, tremors, fatigue, somnolence, dyspepsia, dysoria, nervousness, dry mouth, abdominal pain, irritability, and insomnia.

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